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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,734	10/01/2007	Winfried Ebner	CB60561	8306
20462 7590 11/28/2008 SMITHKLINE BEECHAM CORPORATION CORPORATE INTELLECTUAL PROPERTY-US, UW2220 P. O. BOX 1539 KING OF PRUSSIA, PA 19406-0939			EXAMINER DYE, ROBERT C	
			ART UNIT 4151	PAPER NUMBER
			NOTIFICATION DATE 11/28/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

US\_cipkop@gsk.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,734	<b>Applicant(s)</b> EBNER ET AL.	
	<b>Examiner</b> ROBERT DYE	<b>Art Unit</b> 4151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 31-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/21/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 31-34 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown, JR. et al. (PG Pub US2004/0177462).

3. Regarding claim 31, Brown, Jr, et al. (hereafter Brown) teach a method for making a split headed toothbrush comprising a handle and two sections of a brush head spaced widthways adjacent to each other and each section adapted to carry bristles and integrally connected to the handle (see figure 6 and paragraph 30). The method of Brown comprises a step of molding the handle and head sections in an injection molding process wherein the sections are spaced apart from each other (paragraph 39) and a step of moving the two sections closer together (paragraph 43).

4. Regarding claim 32, wherein when the sections are moved closer together in a widthways direction, a distortion of the integral link occurs at the junction between the head part of the section and the neck part, Brown teach that the distortion occurs at the

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link between the head part sections and the neck part (see figure 7 wherein the distortion occurs at head-neck junction).

5. Regarding claim 33, Brown teach that the sections diverge with increasing longitudinal distance (see figure 6) and when the sections are moved closer together, the sections are parallel (see figure 7).

6. Regarding claim 34, Brown teach that the sections are spaced apart in a direction perpendicular to the bristle direction (see figure 6). The sections are space apart in a widthways direction which is perpendicular to the bristle direction.

7. Regarding claim 43, Brown teach a toothbrush with a multi-sectioned head wherein the sections are spaced widthways adjacent to each other, have bristles and are flexibly linked to the handle (see figure 1). Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113).

8. Claims 44-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Klinkhammer (USP 5,171,066, already of record).

9. Klinkhammer teaches an apparatus for making toothbrush with head comprising multiple sections wherein the apparatus is adapted to move the head and neck part of

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the sections closer together (see figures 24-26) wherein sections 18 are moved closer together by the apparatus.

10. Regarding claim 45, the apparatus of Klinkhammer has first and second mold parts (items 152 and 150 in figure 24) and two abutment surfaces which urge the sections 18 closer together (see surfaces 164 in figures 24-26).

11. Regarding claim 46, Klinkhammer teaches that the abutment surfaces have a ramp profiled surface, see rounded corners 160 in figure 25. The abutment surfaces 164 urge the sections closer together as see in figures 25-26.

12. Regarding claim 47, Klinkhammer teaches that the apparatus receives the grip handle part (items 152 and 150 define the cavity to enclose the handle part) and the head region extends outside the cavity (see figure 24) and said head region is capable of contacting the abutment surfaces 164 and urging the sections closer together before the mold parts mate.

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claim 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, JR. et al. (PG Pub US2004/0177462) in view of Hegemann (USP 5,407,254, already of record).

17. Regarding claim 35, Brown teach a method of making a multi-sectioned toothbrush head as described above for claim 31; however, Brown does not teach a method wherein the sections are spaced apart in a direction parallel to the bristle direction. In the same field of endeavor of making toothbrushes, Hegemann teaches a toothbrush wherein the head sections are spaced apart in a direction that is parallel to the bristle direction (see figure 13). The bristles of section 11 run up/down in figure 13 and sections 14 and 16 are spaced apart in the upwards direction with respect to section 11. Thus the spacing is parallel with the bristle direction. It would have been

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obvious to a person having ordinary skill in the art at the time of the invention to have spaced the sections apart in a direction parallel with the bristle direction as taught by Hegemann in Brown for the purpose of simultaneously cleaning the ends and sides of teeth and gums (col 1, line 13-15, and figure 13).

18. Regarding claim 36, Brown teach a method for making a multi-sectioned toothbrush head as described above for claim 31. The toothbrush of Brown has two sections however and Brown does not teach a method wherein three or more sections are used. In the same field of endeavor of making toothbrushes, Hegemann teaches a toothbrush wherein the head is divided into three sections which diverge about a solid angle at the neck (see figure 1) for the purpose of providing simultaneous cleaning to the ends and sides of teeth and gums (col 1, line 13-15 and figure 13). It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a brush head with three sections as taught by Hegemann for the purpose of simultaneously cleaning the ends and sides of teeth and gums (col 1, line 13-15, and figure 13).

19. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, JR. et al. (PG Pub US2004/0177462).

20. Regarding claims 37 and 38, wherein the gap between the two sections is less than 0.5mm and the sections are in sliding contact with each other, Brown does not explicitly state the size of the gap between the two sections. However, it is apparent from figures 1, 2, and 4 that the two sections are very close to each other and would be within the 0.5mm distance. Furthermore, the two sections appear to be touching and

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would at least be within sliding contact when the sections are flexed. Brown illustrates a very small gap between the two sections and it would have been an obvious matter of design choice for a person having ordinary skill in the art at the time of the invention to choose an appropriate small gap size.

21. Regarding claim 39, Brown teach a method wherein the toothbrush head is made of a thermoplastic material and the sections are moved closer together with the material in a hot malleable state (see paragraphs 42-43). In the method of Brown however, the toothbrush remains in the mold for a period of time and solidifies (paragraph 40) and Brown teaches that heat must be reapplied to the toothbrush material in order to return the toothbrush to a hot malleable state (paragraph 42) before pressure is applied. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have simply reduced the time spent within the injection mold and press the sections before they cooled, thus eliminating additional step of reapplying heat to the brush material.

22. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, JR. et al. (PG Pub US2004/0177462) in view of Vrignaud (USP 6,108,852, already of record).

23. Regarding claim 40, Brown teach a method of making a toothbrush as described above for claim 31, however Brown does not teach a method wherein a second fluid plastic material is applied. In the same field of endeavor of toothbrush manufacture, Vrignaud teaches a method for making a toothbrush with a multi-sectioned head wherein a second material is applied around the neck part of the brush (material 50 in



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figure 1) for the purpose of holding the head sections together in an integrated operative relationship (col 5, lines 38-39). This material is injected around the sections (see figures 1 and 1A). It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a second material as taught by Vrignaud in the method of Brown for the purpose of holding the two sections in a desire position (integrated operative relationship, col 5, lines 38-39).

24. Regarding claim 41, Vrignaud teaches that the second material is injected around a part of the neck part (see figures 1 and 1A) for the purpose of holding the head sections together in an integrated operative relationship (col 5, lines 38-39). It would have been obvious to a person having ordinary skill in the art at the time of the invention to have injected a second material as taught by Vrignaud in the method of Brown for the purpose of holding the two sections in a desire position (integrated operative relationship, col 5, lines 38-39).

25. Regarding claim 42, wherein the skeleton structure has a void space into which the second material is to be injected and said void space is in communication with a gap between the sections, Vrignaud teaches void spaces (ridges, item 60 in figure 2) which are in communication with the two sections. Vrignaud teaches that the void spaces are for receiving the second material and provide for a stronger mechanical connection between the second material and the handle (col 6, lines 12-19). It would have been obvious to a person having ordinary skill in the art at the time of the invention to have injected a second material into void spaces as taught by Vrignaud in the method of

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Brown for the purpose of providing a stronger mechanical connection between the second material and the toothbrush skeleton (col 6, line 12-19).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT DYE whose telephone number is (571)270-7059. The examiner can normally be reached on Monday to Friday 8:00AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571)272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. D./

*/Angela Ortiz/*

***Supervisory Patent Examiner, Art Unit 4151***